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ABSTRACT

Two conditions make the future of private vocational schools look bright. First, only about one-fourth of all high school students are currently enrolled in vocational programs, and second, it is estimated that more than three-fourths of all students could benefit from such programs. A recent study revealed a total of 7,000 private, profit-making schools were serving an estimated 1.5 million students, meeting the needs of students through their diversification of programs and their highly specialized staff. In private vocational schools the evaluations are usually made by private accrediting organizations; student failure means teacher failure, and the dropout rate is usually lower than that of high schools and colleges. The usefulness of the private schools would be enhanced by congressional recommendation for use of the schools under provisions of the Vocational Education Act leading to joint ventures with public high schools, and by a government-sponsored loan-grant program enabling more students to attend these private schools. (JS)

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Private Vocational Schools

Their Emerging Role in Postsecondary Education

By

A. HARVEY BELITSKY

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Preface

This paper was prepared at the invitation of the Bureau of Higher Education, Office of Education, U.S. Department of Health, Education, and Welfare. It is a slightly revised version of a paper which will appear in a collection of studies to be published in 1970 by the Bureau of Higher Education under the title *Trends in Postsecondary Education.* The paper is based on research made possible through a grant awarded to the Upjohn Institute by the Ford Foundation. Complete findings on the research were published in 1969 in the book *Private Vocational Schools and Their Students: Limited Objectives, Unlimited Opportunities.*

The views expressed do not necessarily reflect policies or positions of the W.E. Upjohn Institute for Employment Research.

A. Harvey Belitsky

Washington, D.C.
March 1970

Contents

Preface v
Introduction 1
Status of Vocational Education 1
Estimated Number of Schools and Students 3
Types of Courses Offered in Trade and Technical Schools 5
Aspects of Instruction 7
Evaluation: A Continuing Need 8
Instructors' Roles 11
Student Characteristics and Needs 13
Prospects for Private Vocational Schools 15
Toward Equality of Educational Opportunity 16
Bibliography 18
Appendix 20

PRIVATE VOCATIONAL SCHOOLS
Their Emerging Role in Postsecondary Education

Introduction

This study undertakes to clarify the role of private vocational schools as one of the institutions providing postsecondary education. The principal topics include: estimated number of schools and students, types of occupational training, nature of instruction, student characteristics, and regulation and accreditation of the schools.

The general status of vocational education is initially considered in order to explain the still inadequate awareness and acceptance of the private vocational schools and their students. Finally, in a brief concluding section, a proposal to enhance the equality of educational opportunity is offered.

Status of Vocational Education

Despite steadily growing enrollments in colleges and universities, the potential number of students who can benefit from instruction in private vocational schools will continue to be exceptionally large. The promising future of the schools is based upon at least two major conditions. First, only about one-fourth of all high school students are enrolled in a vocational education program. Second, less than 25 percent of all high school students ultimately complete a four-year college program.

The expected advances in the use of private vocational schools are grounded in the demonstrated capacity of the schools to motivate and train students with various needs and interests for specific occupational objectives. Young persons lacking vocational qualifications, private employers, and several government agencies have shown the greatest appreciation of the schools' capabilities and have also made the most use of them. In general, however, educators and school counselors have been uninformed about and even antagonistic to the private vocational schools.

Since high school graduates and nongraduates will continue to enroll in vocational schools, it is important to consider some of the plausible reasons why key persons involved in advising such students have disregarded the schools. Insights into this paradox arise from (a) the current emphasis upon college education, and (b) the contrasting objectives of vocational schools and colleges.

Dr. James B. Conant and other highly respected educators have been critical of the many parents who ignore the aptitudes and interests of their children and pressure them to pursue some form of higher education. Quite understandably, the school counselors typically reflect a community's interest in maximum college enrollment. The number of counselors in most schools is, moreover, inadequate, and the counselors who are available are unfamiliar with the needs of and the opportunities for students not headed for college. The net result of these conditions is that educational resources are not efficiently used, and numerous cases of personal frustration and disillusionment occur.

Dr. John W. Gardner, while strongly favoring equality of educational opportunity, has stressed the desirability of providing superior vocational education, and he has accented the possibilities and importance of achieving "excellence" in all forms of education and work.

The preeminence given to college enrollment by educators, counselors, and parents is naturally related to the academic program and, perhaps even more, to the ultimate types of employment that college graduates are likely to secure. The liberal arts curriculum is an important educational component of colleges and universities. Such a curriculum may be a preparation or requirement for an occupationally oriented program, but students may also select the subjects for their intrinsic value. Even undergraduate curricula that lead directly to employment (e.g., business administration or engineering) require some general education subjects. In contrast, vocational schools, particularly the private ones, offer hardly any subject matter that is not directed toward the ultimate requirements of a job; and the courses, usually less than two years in length, are not concluded by the conferring of a degree. The term "course" is used by private vocational schools to represent the entire training program. Comparatively few of the private vocational schools are actually able to confer an associate degree under current regulations in their states. Pennsylvania, for example, began considering private vocational schools' eligibility to award an associate degree in 1969.

Private vocational schools differ from colleges and universities not only in subject matter taught but also in financial structure. Colleges and universities, whether private or public, are overwhelmingly nonprofit, while the great majority of private vocational schools are profitmaking, or more accurately, profitseeking organizations.[1] This need not be noted *per se* as a distinguishing characteristic between the two types of institutions, but it

[1]A decision by a judge of the U.S. District Court for the District of Columbia might lead to the establishment of many more proprietary colleges. The Middle States Association of Colleges and Secondary Schools, Inc., was found: (1) to be in restraint of trade, and (2) to deny constitutional due process by requiring applicants for accreditation to be nonprofit institutions. See Civil Action No. 1515-66.

has in fact been raised as an additional factor of comparison. However, it appears appropriate to focus less attention on the financial structure of an educational or training institution and, instead, to examine more closely student needs, the nature of the programs, and the competence of instructors.

This approach could lead to a clearer differentiation between the two types of institutions. Perhaps it would then be concluded that colleges and vocational schools are "noncompeting groups," to be evaluated on the basis of their comparative excellence in instructional programs and the performance of their graduates on the job. (Colleges and universities should naturally be supported in their search for excellence in those fields of study that are not directly related to ultimate employment.)

Estimated Number of Schools and Students

The first serious attempt to estimate the number of private vocational schools and to consider their programs was made in 1964. Drs. Clark and Sloan estimated that there were more than 35,000 schools, with an enrollment exceeding five million.[2] However, these figures included schools offering both vocational and leisuretime training programs.

The author's study on which this paper is based disclosed a total of 7,000 private schools limited to vocational education and serving approximately 1.5 million students during 1966.[3] These conservative estimates were divided into the following four broad occupational categories:

Occupational Category	Schools		Students	
	Number	Percent	Number	Percent
Total	7,071	100.0	1,563,556	99.9
Trade and Technical . . .	3,000	42.4	835,710	53.4
Business	1,300	18.4	439,500	28.1
Cosmetology	2,477	35.0	272,470	17.4
Barber	294	4.2	15,876	1.0

[2]H.F. Clark and H.S. Sloan, *Classrooms on Main Street* (New York: Teachers College Press, 1966), p. 4.

[3]*Private Vocational Schools and Their Students: Limited Objectives, Unlimited Opportunities* (Cambridge: Schenkman Publishing Company, Inc., 1969), p. 9.

The above figures were based upon responses to a written questionnaire by 1,200 schools and upon supplemental information provided by associations of the four types of schools. The number of cosmetology and barber schools was exact because their respective associations conduct an annual census. In 1966 the United Business Schools Association had a membership of 500 schools offering secretarial, accounting, business administration, and other courses; and it maintained a record of 800 nonmember business schools. The National Association of Trade and Technical Schools (NATTS), established in 1965, had only 200 member schools, but the Association's mailing list was several times that number.

As shown above, the majority of students attended trade and technical schools. Added to the enrollment in business schools, these two categories accounted for 80 percent of all students. However, the cosmetology and barber schools are quantitatively important because they train most of the persons entering such occupations.

The data also revealed that the average annual enrollment in each type of occupational training school was rather small. Less than 5 percent of the schools enrolled more than 2,000 students annually. The average business school enrolled less than 350 students annually; this exceeded the average enrollment in the trade and technical schools by 20 percent and was much greater than the typical enrollments in the cosmetology and barber schools.

One explanation for the small size of most of these schools is related to the importance assigned to practical, problem-solving aspects in the courses. It follows that only a short period of time is spent in large classrooms, and the costs of adequate space and machinery in shop and laboratory settings necessarily limit the size of a school building and its staff. Second, the schools are widely distributed geographically--often either located in cities with less than 100,000 persons or situated within sections of a large metropolitan area. A third reason is that the trade and technical schools (the primary focus of attention in this study) tend to train for single or related occupations. Nevertheless, collectively, the large number of highly specialized trade and technical schools offer the greatest diversity of courses.

Although most private schools operate on a year-round basis and offer both day and evening sessions, the capacity for expanding enrollment appears to be sizable. The possibilities for growth are primarily due to the underutilization of staff and facilities in afternoon and evening classes. According to a survey of NATTS members, the schools were operating at only 60 percent of their capacity. On the basis of this estimate, all trade

and technical schools could accommodate an additional one-half million students.[4]

Some of the salient features of the home study or correspondence schools must be at least noted, even though such schools undoubtedly merit a much more extensive survey.

The National Home Study Council, with a membership of 120 accredited schools, is the principal association for these schools. (Some of the schools have vocational school divisions similar to those considered in this study.) Accreditation is provided by the Council's Accrediting Commission, which is recognized by the U.S. Office of Education. There are also approximately 500 nonaccredited correspondence schools. Unlike the members of the National Home Study Council, the nonaccredited schools do not always require examinations and frequent "exchange" between school and student.

Since homes serve, in effect, as a substitute for classrooms, the number of correspondence schools is much smaller than the estimated total of private vocational schools, and the enrollments are considerably larger. One international correspondence school has had more than 100,000 students during each of the past five years. The National Home Study Council members have students in every state, and their total enrollment is equal to that of the private vocational schools. When the enrollments in nonaccredited schools and the Armed Forces are added to those of the Council, the aggregate figure is five million students.

The total number of subjects taught by correspondence is about 600 and includes vocational subjects, high school courses, and college-level courses. Students can naturally hold jobs and learn at their own desired pace.

Types of Courses Offered in Trade and Technical Schools

The variety of occupational courses found in private trade and technical schools reflects the unique ability of these schools to respond to the training needs of many industries and professions. About 230 different occupational courses were offered in the more than 500 trade and technical schools examined in this study.[5] Since most schools offered more than one course, the

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[4] *Ibid.*, p. 46.
This estimate excludes the unused capacity in business, barber, and cosmetology schools.

[5] *Ibid.*, pp. 13-14.

total number of courses provided by these schools was nearly 1,500.

The six major vocational categories (based on the number of courses in each category) were:

Vocational Category	Number of Courses
Total	**851**
Auto Maintenance and Related Services	127
Data Processing	185
Drafting	131
Electronics	159
Medical Services	154
Radio–TV	95

Less than 60 percent of all reported courses are included in the above categories. The three largest areas of training (data processing, electronics, and medical services) are acknowledged to be growth fields in most manpower projections. The other three categories cannot necessarily be designated "traditional," because drafting may be allied with the electronics industry and a radio-TV course may emphasize the repair of color television sets. Even automobile repair offers numerous employment openings for competent workers.

Other important training fields include courses in commercial arts; construction; fashion design; needle trades; shoemaking; food preparation, processing, retailing, and service; interior design and related services; machine shop; major and minor appliance repair and servicing; photography; printing; promotion, sales, and related services; tool and die design; various forms of transportation and traffic management; and welding. Finally, courses in aerospace engineering technology, waste and wastewater reconversion, gardening, hotel-motel operation, and many others though listed by only a few schools, are areas of growing job opportunities.

Not all of the courses (see list in Appendix) are equivalent to generally accepted occupational designations. However, occupational breakdowns are necessarily somewhat arbitrary, and personal differences are evident with respect to vocational interest, ability, and willingness to devote the required time to what is regarded as ideal, well-rounded training.

The great variety of occupational training is matched by a wide diversity in course length and, quite expectedly, in tuition. Tuition ranged from about

$100 to $4,500 and averaged nearly $1,200 annually for the courses offered by the members of NATTS in 1966.

Aspects of Instruction

The instruction in private vocational schools is highly specialized, with a view to the final employment objective. Therefore, the schools maintain close but informal contacts with employers. Course content is readily modified to reflect pertinent changes that are reported to school officials by employers. Decisions to add improved facilities can also be made rapidly and directly. This differs from the delays often encountered by public schools and colleges that must seek approval from school boards or legislatures.

Training is provided in a job-simulated setting. Visual aids and operative equipment of all types are typically more important than textbooks. Classroom or lecture instruction is usually followed immediately by supplementary training in the school shop, laboratory, kitchen, or "department store" in order to demonstrate the practical application of theoretical concepts. Most schools also arrange student visits to plants and offices. Modest home assignments are required for many courses because only those theoretical concepts which are relevant to the performance of a job are taught.

The emphasis upon the functional phases of instruction represents more than an adaptation to the actual requirements of an ultimate job. It also reflects the minimum level of formal education that is required for admission to the schools. A substantial percentage of all schools accept students who have not completed high school. At least 10 percent of the business schools offer a minimum of one course that calls for less than a high school education for admission. Approximately 40 percent of the trade and technical schools provide at least one course that does not require completion of high school. Educational requirements for admission to barber and cosmetology schools are lower still; less than 10 percent of these schools require high school graduation or its equivalent.[6]

The private vocational schools have also devised methods for motivating many of their students who found the general education program in high school unstimulating. Hence, course materials are presented in short, sequential units which reinforce previously learned materials. A sense of achievement is experienced by the typical student because he is informed of his progress on a continuing basis rather than at the conclusion of a term or semester.

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[6]*Ibid.*, pp. 28-32.

Another significant aspect of the instruction offered by many of the schools is the provision of training at various levels of accomplishment within related occupations. For instance, in one school students may shift their concentration from a radio-television repair course to a more advanced course in electronics technology, or vice versa, depending on their demonstrated aptitudes and interests. Some schools even provide courses in different occupational fields and permit students to alter their specialty course. These options are, of course, advantageous to students who would otherwise fail their course or else be compelled to accept the dissatisfactions of employment in an occupation that is not their first preference.

A final feature of the instruction is the result of course selectivity among the generally self-financing students. Since the students select occupational courses which they prefer, they are much more likely to be motivated than they would be in the absence of such free choice. Concomitantly, the previously mentioned components of the instruction have such a strong appeal for the students that they contribute *per se* to rather high student motivation. Dr. David P. Ausubel is authoritative in supporting this type of instruction:

> Psychologists have been emphasizing the motivation- learning and the interest-activity sequence of cause and effect for so long that they tend to overlook their reciprocal aspects. Since motivation is not an indispensable condition for short-term and limited-quantity learning, it is not necessary to postpone learning activities until appropriate interests and motivations have been developed.[7]

Evaluation: A Continuing Need

The ultimate value of instruction in private vocational schools is demonstrated both through the graduates' success in finding training-related positions, and in their occupational progress during their working careers. Only partial assessments of student achievement have, however, been made.[8] In any case, since schools change their curricula and teaching staffs or simply fail to adopt important changes initiated by other schools, a continuing means of evaluating the training schools must be available.

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[7]"A Teaching Strategy for Culturally Deprived Pupils," in Miller and Smiley, eds., *Education in the Metropolis* (New York: The Free Press, 1967), p. 293.

[8]Dr. Kenneth B. Hoyt's Specialty Oriented Student Research Program at the University of Maryland is virtually the only source for such findings.

Accreditation or evaluation of most private vocational schools is voluntary, as it is for all types of education in the United States. States do establish hygienic rules for barber and cosmetology schools; and state and federal laws determine the scope of training for a limited number of technical occupations, including certified pipewelder, commercial pilot, ship radio officer, and tractor-trailer driver. Generally, however, business, trade, and technical schools are evaluated by private accrediting organizations.

Accrediting teams evaluate a school on the basis of its success in achieving the purposes and objectives the school has set for itself. About 500 out of an estimated 1,300 business schools are members of the United Business Schools Association (UBSA), sponsor of a recognized accrediting body which has accredited about 250 schools. Schools that are not accredited by September 1970 will no longer be eligible for active membership. In contrast, only about 10 percent of all trade and technical schools are members of NATTS, which received its accrediting status from the U.S. Commissioner of Education in 1967, two years after the Association's establishment.

A "visiting team" from NATTS or UBSA is the principal effective body for evaluating private vocational schools. The team, consisting of technical specialists (industry representatives, educators, and school owners) who are not affiliated with the school under consideration, verifies the school's claims regarding its courses or programs. A check is made of a school's business practices, including job placement records and student recruitment procedures, especially when the school's recruiting representatives work on a commission basis. Student impressions are secured through random interviews.

A NATTS member school must seek accreditation for any newly acquired affiliate, and an accredited school must apply for evaluation of any new course.

An accrediting body examines graduate placement records at the time of accreditation, upon receipt of detailed annual reports, and at five-year reevaluation intervals. In general, practically all schools provide a placement service for their graduates, and a great majority offer the service "for life." The placement ratio (percentage of a school's graduates placed in jobs by a school) has, however, not been determined with any firm accuracy. Of course, many of the students are indirectly helped by the schools to find jobs: more or less formal sessions are conducted on how to prospect for work, and visits to schools by recruiters from industrial concerns afford students an early and convenient start in job-searching.

School followup of students after graduation is a crucial means of determining the percentage of students who secured training-related jobs and their occupational progress over the years. Most schools follow up their graduates for one year; but only about 20 percent of the schools gather information on their graduates' employment progress after the first year. It would seem, therefore, that private vocational schools–as well as most other educational and training institutions–could improve their followup procedures and, in turn, provide accrediting teams with additional important evidence for evaluating the schools.

In the absence of dependable data on the employment experiences of private vocational school graduates, only indirect and qualified impressions are possible. In the first place, the utilization of the schools under numerous government-financed training programs represents a measure of the confidence placed in the courses, teachers, and managements. Second, close contacts between the schools and employers are likely to ensure the presentation of "relevant" training. Third, graduates recommend the schools to others, and in fact they are a principal source of new students; thus they must have been pleased with the training and employment received.[9]

In addition to the practical advantages of accreditation, such as detached evaluation and suggestions for improving a school's functioning, accreditation draws attention to competent schools and strengthens their competitive position with counselors and prospective students. Also, poor schools may be forced to improve their teaching standards, purchase necessary equipment, and generally raise their capital base.

The importance of voluntary accreditation is especially apparent when it is noted that less than half of all states license the operations of private vocational schools and that a considerably smaller percentage of the states carefully evaluate instructional courses.[10] Principal interests of the regulating states include: financial structure (e.g., requirement to post bond), teacher qualifications, course outlines, adequacy of equipment, student contracts, and advertising claims.

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[9]Belitsky, *op. cit.*, p. 125.

Eighty-five percent of about 1,100 surveyed students gave their schools at least an "average" rating.

[10]"Licensing is nothing more than a permit to do business, having regard generally to safety and commercial standards. Certification, on the other hand, is generally related to curriculum, instructional staff, facilities, etc...." See R. Fulton, "Proprietary Schools," *Encyclopedia of Educational Research*, 4th ed.

In general, the inspection of private schools by most state supervisors is less thorough than that of a NATTS accrediting team. Each state supervisor in even the larger states frequently must oversee a sizable number of schools. New York and possibly a few other states utilize subject specialists in their evaluative inspections when a school introduces a new course. According to New York law, each course must be reevaluated every five years; this is similar to a NATTS provision.

Most of the 20 states that regulate private schools require instructors to have work experience, ranging from two years in Colorado to eight years in Massachusetts, in the vocation that they are teaching. Usually work experience is an alternative to formal education, and no state requires more than a high school education. However, a survey of instructors in the member schools of NATTS disclosed that about 60 percent of the instructors actually had some college education and more than one-third of the total had at least four years of college education.[11] The larger independent schools, plus those operated as subsidiaries of corporations, often pay the tuition of their instructors enrolled part time in college courses that are related to their teaching fields.

Instructors' Roles

It is noteworthy that numerous policies regarding instructors in private vocational schools are still exceptional cases or experiments in other schools. For instance, most private schools consider a sizable number of student failures in one instructor's course, or in several of his courses over time, an indication of the *instructor's* failure.

Instructors in private vocational schools are urged to consider their students as "clients," not "charges." An important financial accountability, therefore, resides with the school and its instructors. The supervisor of a school for electronics technicians once observed that each prospective instructor must be critically evaluated, since the referrals of former students account for at least 50 percent of a school's student body. The schools are convinced that creditable teaching performances can be ensured by making teaching capability the main criterion for reward and advancement; and instructors are not usually given tenure.

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[11] Seven hundred and twenty-six full-time and part-time instructors were included in the 65 schools responding. See E.L. Johnson, *A Descriptive Survey of Teachers of Private Trade and Technical Schools Associated with the National Association of Trade and Technical Schools*, doctoral dissertation submitted to The George Washington University; reproduced in part by Griswold Institute Print Shop, Cleveland, 1967, pp. 57, 70.

A distinctive instructor-student relationship in vocational schools naturally influences the form and manner of instruction in such schools. For example, the instructors at many schools engage in "group teaching on an individual basis." This consists of students proceeding at the same pace in the theoretical part of their course and at different rates of progress in the practical or shop training. Students who are deficient in the theory portion of a course are encouraged to seek aid in frequently conducted review classes.

Shop training, on the other hand, is apparently more readily learned and applied although there are differences in performance levels here, too. It is therefore an instructor's responsibility to circulate freely among individuals or small groups of students.

Small classes and individualized instruction make many of the schools an ideal setting for training both students who failed in secondary schools and persons with a variety of handicaps who are referred by a Vocational Rehabilitation Center. Students with varied capacities surely require instructors who are not limited to a fixed lesson plan. In addition, instructors must be able to accommodate students who are at different stages of progress because students can enroll in many of the courses at frequent intervals (i.e., there is no single starting date).

In view of instructor responsbilities, the typical student-teacher ratio for classroom instruction or lectures is small–at least when compared with the ratios found in the introductory subjects of many colleges and universities. About 60 percent of the NATTS members had a ratio of 24 or fewer students per instructor. Of course, the average ratio is still lower in the shop, laboratory, and machine practice. The majority of the schools assigned 19 or fewer students to an instructor at any given time.[12]

The student-teacher ratio is also significant since teachers often counsel students. Although not licensed to provide guidance, the instructors have to assume the role of guidance counselors to assist students who have been inadequately counseled or not counseled at all while in high school. This is a direct result of the limited number of high school guidance personnel and their equally limited views on postsecondary vocational education. Consequently, many persons who drop out of school, and even many who graduate from high school, have insufficient knowledge of occupational training opportunities and the labor market. A substantial proportion of students are not thoroughly familiar with the courses provided by private vocational schools, or else they learn about the schools through friends

[12]Belitsky, *op. cit.*, pp. 82-83.

attending them, members of their families, newspaper advertisements, or sales representatives of the schools. As a major consequence of these informal lines, many young persons who enroll in the schools are likely to do so with incomplete information on the nature of training, requirements of the occupation they are training for, and the opportunities for advancement.

The counseling continues throughout a course for many students and may involve a fatherly form of encouragement that is not available at home. This includes the provision of extra assistance after class hours to a small group or even to an individual in such subjects as elementary arithmetic and reading.

Student Characteristics and Needs [13]

Since students are the major "consumers" at private vocational schools, it has been in the interest of school administrators and instructors to adjust to student differences in age, educational attainment, ability, and health.

Although the average age of the enrolled students is comparatively young, there have been numerous instances of success in training older persons, both the healthy and those ailing physically or emotionally. The study of NATTS schools disclosed a median age of 20 years for students enrolled in the day sessions; only about 10 percent of the students were 26 or older. The average age of evening students was considerably higher, with nearly two-fifths being 26 or older. Most evening students had been employed full time, and a high percentage of them still found it necessary to work full time during the day while training for a specialty within their occupation, or for a completely different vocation. For both day and evening sessions, the general age range at the NATTS schools during 1965 to 1967 was 17 to 48 years; but some schools even had students who were in their sixties.

Although enrollees in the trade and technical schools are predominantly men, several schools do provide considerable training opportunities for women in such courses as medical and dental assisting, commercial art, and

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[13] It is not known to what extent Negroes and disadvantaged members of other minorities have been enrolled in private vocational schools. Probably most of the Negroes enjoying such opportunities receive financial aid under programs of the Veterans Administration, Vocational Rehabilitation agencies, the Manpower Development and Training Act, and other government agencies. However, in some nonprofit schools, notably the Opportunities Industrialization Center (OIC), Negroes have been the principal beneficiaries. The OIC was organized in Philadelphia, but several of the training centers have been established recently in other cities.

hotel-motel management. The women naturally account for the large majority of students enrolled in business and cosmetology schools.

Flexibility of the schools in accommodating students of varied backgrounds and needs is particularly evident with regard to educational preparation. Student bodies include:

1. High school dropouts with no occupational training.
2. High school graduates of a general education program who lack any specific preparation for employment.
3. High school graduates who fail to pass the private schools' aptitude tests in algebra or even arithmetic.
4. Persons preparing for a licensable occupation.
5. College dropouts, or even college students and graduates, desiring an otherwise unavailable course, such as computer programming.
6. Persons for whom the formal education requirement is eased because they have had several years of employment experience but are currently unemployed or finding it difficult, for physical reasons, to remain in their present occupations.

Besides taking account of their students' educational preparation, school administrators adjust the scheduling of courses to the requirements of students. For some courses, new students are enrolled as often as once each week. The majority of schools have four new classes annually, but they may accept students on a monthly basis. Students can also attend either day or evening sessions, and they can choose to attend on a full- or part-time basis. Courses given by members of NATTS ranged from one-half week to 130 weeks. The median for these courses was 40 weeks. Most courses require twice as long when taken on a part-time basis. The option of enrolling in a course on either a full-time or part-time basis and the great variations in course length afford considerable flexibility to students. Finally, practically all trade and technical schools operate at least 48 weeks annually, permitting the ambitious student to complete the already compact course most expeditiously.

After a typical student is enrolled in a private school, his major challenge is having adequate funds to finance all expenses during the period of education. Although empirical data are unavailable, it is likely that students are predominantly from middle-income families where the father is *not*

employed in a professional or managerial position. Only a small minority of students attending trade and technical schools can rely upon their parents or personal savings to pay for their entire schooling. For example, more than two-thirds of the students enrolled at a large technical school, which has been granted recognition for transfer of credits to several colleges and universities, are compelled to work on a part- or full-time basis.[14] The school owners' practice of accepting deferred payments is a useful, albeit limited, form of financial assistance that is available in most schools. Under this practice, students may elect to pay their tuition in installments throughout the year rather than in one or two lump-sum payments.

Despite financial pressures, the student dropout rate is only approximately 20 percent in these schools–lower than the dropout rate in most high schools and colleges. This is at least partially due to student selection of courses which satisfy individual vocational interests. Financial problems are the major reasons for student failure to complete courses. The next most important reasons cited–the presence of family problems and securing a full-time job–also suggest the presence of financial difficulties for at least some of the students. School owners report that only a minor percentage of students fail to complete their courses due to lack of ability.

Prospects for Private Vocational Schools

Private vocational schools are likely to experience a consistent growth in enrollments and greater general acceptance as an important training resource for persons who do not attend college. Moreover, the congressional recommendation for use of the schools under provisions of the Vocational Education Act could lead to joint ventures with public high schools.

The types of courses offered in these highly flexible schools will be a function of at least four factors. In the first place, the schools will continue to adapt to those areas of the economy undergoing expansion and innovation. For example, the schools were among the first to offer courses in the allied health fields, computer programming, and commercial flying. Second, and especially within a specific community, the private schools will offer those courses that are either not taught in the public schools or else are unavailable in sufficient number to meet the desires of students. The third factor is the extent to which public schools, and even colleges throughout the country, will decide to subcontract with the private schools for those vocational education courses which they cannot provide for their students. A fourth factor is both the increased corporate subcontracting of training with the

[14]Belitsky, *op. cit.*, p. 106.

schools plus the significant expansion in corporate purchase and operation of the schools. This factor is also likely to have an independent influence upon the general growth of the schools.

The types of courses offered and the educational requirements for admission determine, to a great extent, the nature of the student bodies in the schools. In all probability, the students' average level of formal education has risen faster than the average educational requirement for admission to the schools during recent years. This conclusion is based on the author's study comparing admission requirements with actual qualifications of students. The greater educational preparation of most students could lead more schools to raise the level of sophistication in many of their occupational training courses.[15]

On the other hand, since most trade and technical schools have unused capacity and an interest in enrolling more students, their programs might be broadened to accommodate the large number of people who need initial training, upgrading, or retraining. This would involve accepting more persons with lower educational attainment. The author recommends a government loan-grant program as an equitable means for enabling these persons to attend private vocational schools.

Toward Equality of Educational Opportunity[16]

It would be operationally desirable to have a government loan- grant program for *all* persons seeking employment-related training in private vocational schools. There is, however, a more important reason for universalizing the program--namely, an impressive growth in social concern for and commitment to "free public education."

The goal of equality of educational opportunity must naturally also provide more persons in low-income families the option of securing a college education. Nevertheless, equality (or, more accurately, equity) will not be achieved by placing an exaggerated emphasis upon college preparatory programs in high school. Many students simply lack either the interest or the ability to attend a college or even a junior college. Also, a community college, public technical institute, or area vocational school may not always

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[15]Only a minority of trade and technical schools have thus far applied to colleges and actually received partial transfer credits for students desiring to attend college. Business schools may possibly have been more active in this regard.

[16]Belitsky, *op. cit.*, pp. 144-150, for a more detailed discussion.

be available. Even where "free" schools are available, the courses that a prospective student wants may not be offered; or else, the course length and its contents may differ from his preferences.

In view of the free or heavily subsidized education that is accessible to a sizable and rapidly increasing number of students in universities, colleges, and other public institutions, it would be equitable to improve the opportunities of students who choose to attend private vocational schools. The realistic and economically sound recognition and usage of the private schools could be a major means for expanding the laudable goal of equal educational opportunity.

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APPENDIX

Types of Courses Offered in 544 Reporting Trade and Technical Schools*

Type of Course	Number of Courses
Total	**1,483**
Auto Maintenance and Related Services	**127**
Appraiser–Auto Damage	2
Attendant–Service Station	3
Mechanic–	
Basic and Master	50
Diesel	6
Salesman–Parts Counter	1
Specialist–	
Air Conditioning	8
Automatic Transmission	13
Body and Fender Repair	22
Conventional and Power Brakes	4
Front End and Wheel Alignment	6
Engine Tune-Up	12
Commercial Arts	**61**
Artist–Commercial	31
Consultant–Color	1
Designer–	
Greeting Card	2
Textile	3
Glass Blower–Neon	1
Illustrator–	
Children's	1
Fashion	8
General	11
Letterer	1
Painter–Sign	2

*A. Harvey Belitsky, *Private Vocational Schools and Their Students: Limited Objectives, Unlimited Opportunities* (Cambridge: Schenkman Publishing Company, Inc., 1969), Appendix to Chapter 2.

Construction	**41**
Building Craftsman–	
Electrician	8
Heavy Equipment Operator and Mechanic	5
Mason	2
Painter	1
Plumber and Pipefitter	3
Steamfitter	1
Structural Iron Worker	1
Cabinetmaker (includes woodworking techniques)	7
"Engineer"–	
Architectural Aide	3
Civil Aide	1
Construction Technician	3
Estimator	3
Maintenance Man–	
Technician	2
Superintendent	1
Data Processing	**185**
Computer Maintenance	23
Computer Programmer	76
Data Processor (includes Keypunch and Tab Operator)	86
Drafting	**131**
Blueprint Reader	6
Draftsman–	
General (includes basic, intermediate, and advanced)	44
Architectural	16
Electro-Mechanical	4
Electronic and Electrical	16
Engineering	13
Mechanical	22
Structural	6
Illustrator–Technical	3
Renderer–Architectural	1
Drycleaning and Laundry	**10**
Drycleaner	3
Helper–Laundry	2
Manager–Drycleaning	2
Presser–Laundry-Factory	2
Spotter	1

Electronics [a]	**159**
Servicer	22
Technician [b]	137
Fashion Design, Needle Trades, and Shoemaking	**63**
Buyer–Assistant	3
Designer–Fashion and Assistant Fashion	12
Dressmaker	9
Fitter	2
Patternmaker and Grader	10
Repairman-Rebuilder–Power Sewing Machine	1
Sewer–	
Needle Trades	9
Power Machine	4
Shoemaker-Shoe Repairman	2
Tailor and Alterer	11
Floristry and Groundskeeping	**14**
Designer–Floral	3
Groundsworker–	
Gardener	2
Landscaper	1
Nursery Worker	1
Retailer–	
Florist	3
Sales Clerk	2
Shopowner	2
Food Preparation, Processing, Retailing, and Service	**25**
Preparation–	
Baker	1
Chef	3
Kitchen Helper	2

[a]Some of the courses offered in this field include training in data processing. At the other extreme, some might have been more appropriately placed under the less dramatic headings of "Electrical" or "Electricity," but this was impossible to determine from the titles as reported.

[b]Electronics Technician courses prepare for work in a broad variety of occupational settings--including manufacturing plants, laboratories, consulting firms, construction, etc.

Processing—
- Meat Cutter 6
- Meat Wrapper 2

Service—
- Dietetics and Food Service Management 2
- Waiter 1

Retailing—
- Cashier, Grocery Stocker, and Checker 6
- Market Manager 2

Funeral Work 6

Embalmer 3
Funeral Director 3

Hotel-Motel Operation 12

Maintenance Personnel—
- Executive and House Steward 1
- Housekeeping 2

Manager 5

Office Personnel—
- Accountant and Cashier 2
- Clerk 1
- PBX Operator 1

Industrial Management 7

"Engineer"—Time Study 2
Manager—Industrial (industrial management techniques) 5

Interior Design and Related Services 21

Designer—
- Interior 10
- Furniture 1

Related-Skill Workers—
- Carpet Layer 1
- Drapery Maker 2
- Linoleum—Tile Floor Layer 1
- Slipcover Maker 2
- Upholsterer 4

Investigation 3

Fire and Explosion 1
General 1
Insurance 1

Jewelry Design and Repair 13

Diamond Setter 4
Jewelry Maker and Repairman 2
Watch Worker (includes elementary and advanced; also includes engraving) 7

Machine Shop 30

(Includes courses in layout, operation, and inspection, as well as basic machines.)

Major and Minor Appliance Repair and Servicing 53

Technician—Air Conditioning-Refrigeration-Heating 9
Repairman—
Electric Motor 6
Master Appliance 4
Office Machine 2
Small Appliance 3
Serviceman—
Air Conditioning 12
Oil Burner 5
Refrigeration 12

Medical Services 154

Aide—
Geriatric 1
Home Health 1
Hospital 2
Institutional 1
Nursing 4
Pediatric 1
Assistant—
Dental 25
Doctor's Office 3
Laboratory 3
Medical 24
Examiner—Medical Claims 1
Hygienist—Dental 1
Nurse—
Licensed Vocational 1
Practical 8

Orderly	1
Secretary–Medical[c]	23
Technician–	
Dental	8
Laboratory	9
Medical	13
Optical	1
Technologist–	
Dental	17
X-Ray	6
Performing Arts	8
Performer–Dance, Music (includes opera and concert singing); Theater (includes cinema, stage, and TV acting)	6
Dramatist–Radio-TV	1
Speaker	1
Personal Services	9
Finishing–Personal	3
Modeling	5
Swedish Massage	1
Photography	18
Photographer–	
Commercial	3
Medical	1
Motion Picture	1
Newspaper	1
Portrait	4
Printer-Retoucher–	
Airbrush Technique	1
Colorist	3
Dye-Transfer Printing	1
Negative Retouching	2
Repairman–Camera	1
Printing	27
Artist–Graphic	5
Assistant–General Print Shop	1

[c]Although other listings of office occupations are excluded, an exception is made for *medical secretary* because it is assumed that a principal part of this training leads to technical proficiency.

Letterpress–	
Hand Composition	1
Pressman	1
Linotype Maintenance	3
Linotype Operator	4
Monotype Keyboard and Casting Machine Operator	1
Lithography–	
Lithographer	1
Multilith Operator	1
Offset Cameraman	1
Offset Printing	2
Photolithographer	1
Platemaker	1
Pressman	2
Stripper	1
Silkscreen Technician	1
Promotion, Sales, and Related Services	**21**
Promotion–	
Advertiser	5
Copywriter	2
Market Research	1
Public Relations	1
Sales–	
Auctioneer	2
Merchandising	2
Professional Salesmanship	1
Sales and Management	7
Radio-TV	**95**
Broadcaster	19
Repairman	34
Salesman	2
Technician–	
Communications (includes preparation for FCC license)	39
Color TV	1
Recreation and Sports	**8**
Athletic Trainer	1
Bartender	1

Baseball Personnel–	
Business Manager	1
Scorekeeper (also includes softball scorekeeping)	1
Umpire	2
Farrier (includes some veterinary courses)	1
Gunsmith	1
Tool and Die Design	**54**
(Includes plastic molding courses; also includes both separate and combined courses–i.e., certain schools offer separate courses in tool design and die design, and others combine them with one another and/or with tool and die making.)	
Transportation–Air	**47**
Administrator–Aviation Specialist	2
Communications–FAA	6
Flight and Operations Personnel–	
Auxiliary–	
Dispatcher	1
Hostess	6
Instruments	1
Ramp Agent	1
Technician–Airframe Power Plant Mechanic	7
Technician–Radar	1
Pilot	5
Office Personnel–	
Airline Travel Agency	4
International Travel	1
Reservationist	12
Transportation–Freight	**6**
Supervisor–	
Cargo	4
Freight Claim	1
Rate Analyst	1
Transportation–Highway	**7**
Driver–	
Bus	1
Truck–	
Diesel	2
Heavy	1
Straight	1
Tractor-Trailer	2

Transportation–Sea	**11**
Ship Builder	1
Shipboard Personnel–	
Deck Officer–Merchant Marine	2
"Engineer"–Marine	1
Pilot–Merchant Marine	2
Technician–Navigational	2
Underwater Operations Personnel–	
Decompression Chamber Operator	2
Deep Sea Diver	1
Transportation–Space	**2**
Technician–Aerospace Engineering	2
Transportation–Traffic Management	**9**
Traffic Manager	5
Transportation Specialist	4
Waste Reconversion	**1**
Technician–Waste and Wastewater	1
Welding	**54**
Welder–	
General	23
Arc	9
Arc and Acetylene Combination	3
Electric	1
Gas	2
Heli-Arc	6
Oxy-Acetylene	6
Pipe	4